## **ABSTRACT**

## Compounds of general formula (I)

$$U \xrightarrow{(V)_m} (W)_n \xrightarrow{(X)_0} V \xrightarrow{P_2} P_1$$

**(I)** 

5

wherein  $Z = CR^3R^4$ , where  $R^3$  and  $R^4$  are independently chosen from  $C_{0-7}$ -alkyl  $P_1$  $= CR^{5}R^{6}$ ,  $P_{2} = O$ ,  $CR^{7}R^{8}$  or  $NR^{9}$ ,  $Y = CR^{10}R^{11}$ -C(O) or  $CR^{10}R^{11}$ -C(S) or  $CR^{10}R^{11}$ -S(O) or  $CR^{10}R^{11}$ - $SO_2(X)_0 = .CR^{16}R^{17}$  (W)<sub>n</sub>=0, S, C(O), S(O) or S(O)<sub>2</sub>- or  $NR^{18}(V)_m = C(O), C(S), S(O), S(O)_2, S(O)_2NH, OC(O), NHC(O), NHS(O),$ NHS(O)<sub>2</sub>, OC(O)NH, C(O)NH or CR<sup>19</sup>R<sup>20</sup>, C=N-C(O)-OR<sup>19</sup> or C=N=C(O)-10 NHR<sup>19</sup>, U = a stable. 5- to 7 membered monocyclic or a stable 8- to 11membered bicyclic ring which is either saturated or unsaturated, and which includes zero to four heteroatoms and their sales, hydrates, solvates, complexes and prodruges are inhibitors of cathepsin K and other cysteine protease inhibitors 15 and are useful as therapeutic agents, for example in osteoporosis, Paget's disease gingival diseases such as gingivitis and periodontis, hypercalaemia of malignancy, metabolic bone disease, diseases involving matrix or cartilage degradation, in particular osteoarthritis and rheumatoid arthritis and neoplastic diseases. The compounds are also useful for validating therapeutic target 20 compounds.